

D26-1-1 91
D13-1
D26-5-A

MAGNA

(X0265)
(5.1)

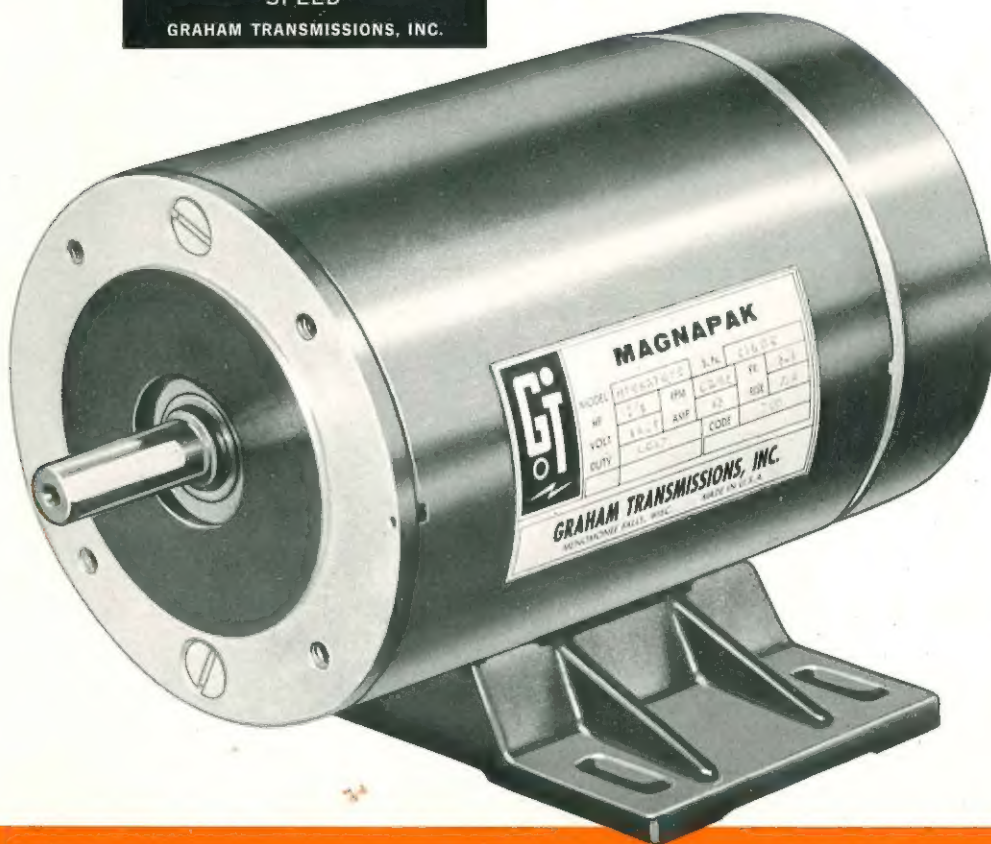


VARIABLE SPEED MOTOR

Rec'd. 10/6/71

the
MAGNAPAK^{T.M.}
is a Permanent
Magnet
D.C. Motor
with Built-in
SCR Control

Sizes
 $\frac{1}{8}$ to $\frac{3}{4}$ H.P.
115V AC



STANDARD FEATURES

- LOW COST
- FULL WAVE
- DYNAMIC BRAKING
- LINE VOLTAGE COMPENSATION
- COMPACT
- VARIABLE SPEED MAX. TO ZERO
- TRANSIENT VOLTAGE PROTECTION
- REGULATED
- TEMPERATURE / SPEED COMPENSATION
- INDUSTRIALLY RATED THRU-OUT
- BUILT-IN CONTROL
- OVERLOAD PROTECTION
- 20:1 SPEED RANGE

GRAHAM TRANSMISSIONS, INC.

P. O. Box 160, Menomonee Falls, Wisconsin 53051 U.S.A. (414) 251-2400

SPECIFICATIONS

GENERAL SPECIFICATIONS FOR MAGNAPAK AND PM MOTORS						
H.P. Rating	1/8	1/4	1/3	1/2	3/4	3/4
Base Speed in R.P.M.	1800	1800	1800	1800	1800	1800
Amps	1.5	3.0	4.0	5.8	9.0	9.0
Voltage	115	115	115	115	115	115
Frequency in C.P.S.	50/60	50/60	50/60	50/60	50/60	50/60
Enclosure	TENV	TENV	TENV	TENV	TENV	Open Drip-Proof
Duty	Cont.	Cont.	Cont.	Cont.	Intermittent *	Cont.
* NOTE: 3/4 H.P. TENV PM motor with Remote MAGNAPAK Control (page 4) rated for continuous duty.						
MAGNAPAK WITH BUILT-IN SCR CONTROL						
Model No. 56C Flange	520122145	520252145	520332145	520502145	520752145	520751245
Model No. Foot Mount	500122141	500252141	500332141	500502141	500752141	500751241
PM MOTORS (Used with Remote MAGNAPAK Controls - Shown on Page 4)						
Model No. 56C Flange	620122145	620252145	620332145	620502145	620752145	620751245
Model No. Foot Mount	600122141	600252141	600332141	600502141	600752141	600751241

NOTE: All models listed in table above are stock units. Base speeds as low as 475 R.P.M. are also available as specials.

The MAGNAPAK is a complete control/motor combination. A full wave SCR control is located in the motor end bell opposite the shaft. The SCR and other components are rated for continuous industrial service.

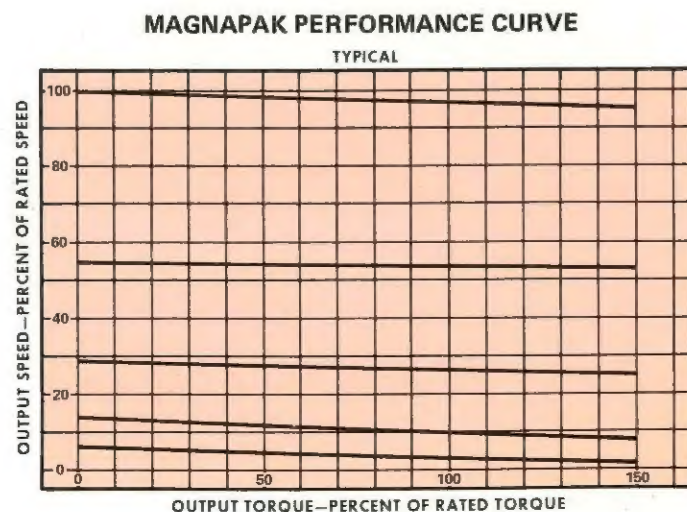
MAGNAPAKS are factory adjusted and ready to run. All that's required is a 5K-1W potentiometer and a switch that can be placed anywhere on the customer's equipment. Dynamic braking can be accomplished by using a double pole - double throw - center off switch and wiring according to the diagram included in the motor.

The potentiometer and switch can be furnished by the customer or Graham has available three remote points.

Reversing is accomplished by using a PM MAGNA-PAK motor (without built-in SCR control) and 555 open type or 550 enclosed type remote point. Included are MAGNAPAK SCR control, potentiometer, run-off-brake switch and forward-neutral-reverse switch.

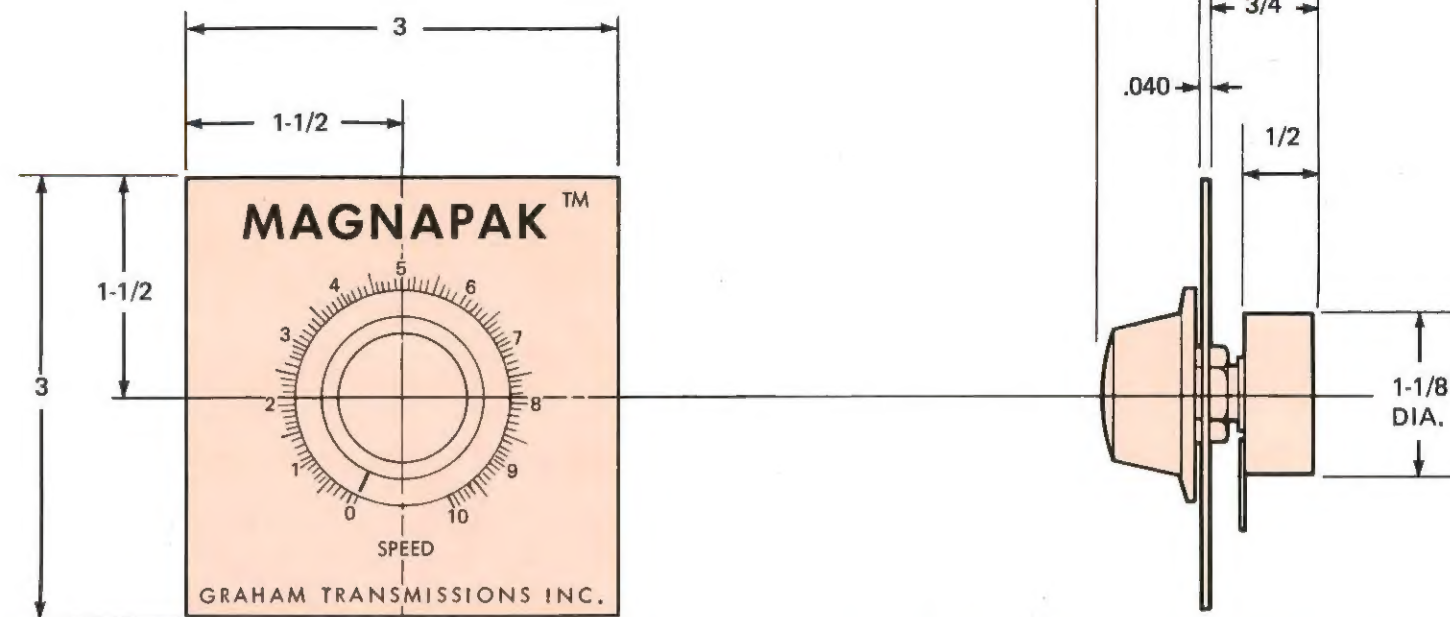
The 560 is a stud mounted MAGNAPAK SCR control used with MAGNAPAK permanent magnet motors. It is remotely mounted in the customer's enclosure along with other electrical components.

The MAGNAPAK has excellent speed-torque characteristics. A representative speed vs torque curve is shown below.



REMOTE POINT — Model 520

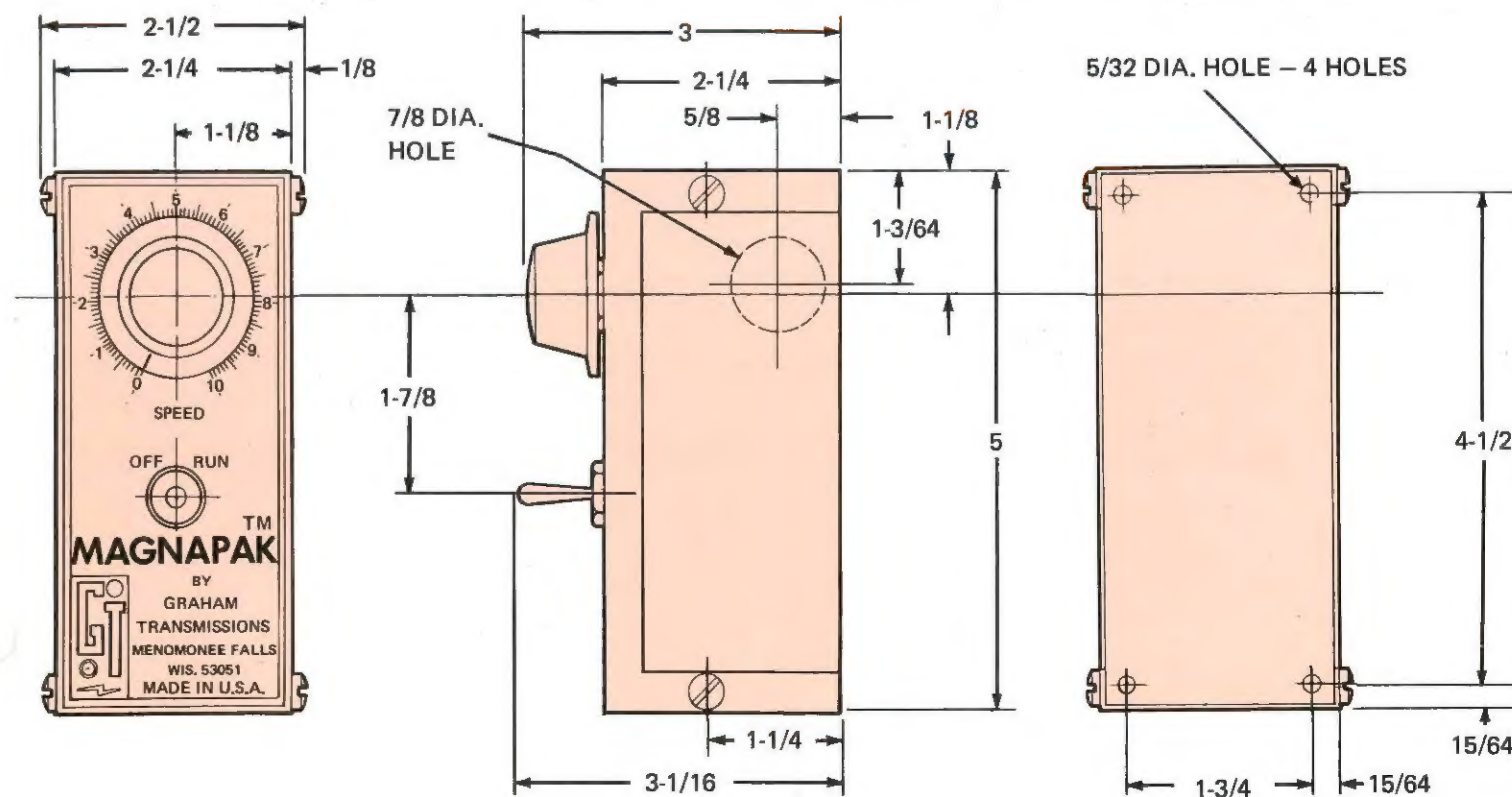
Model No. 520. A heavy duty industrial potentiometer with precision read-out dial.



REMOTE POINT — Models 530 and 540

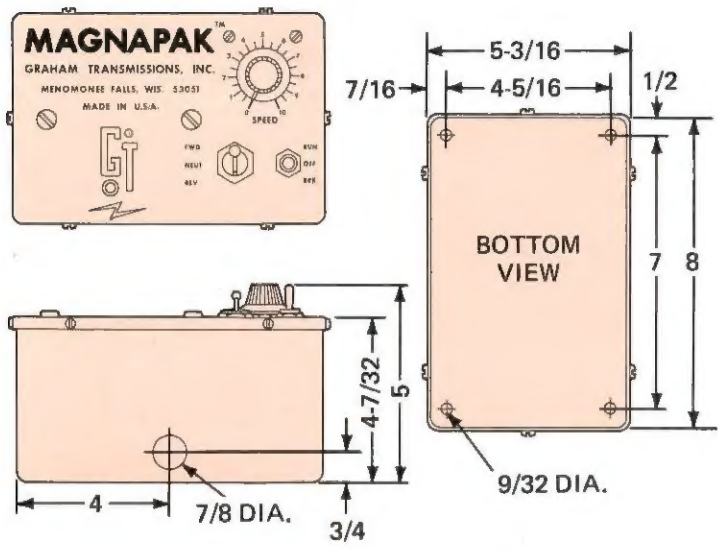
Model No. 530. Enclosure mounted heavy duty potentiometer, off — run switch and fuse.

Model No. 540. Enclosure mounted heavy duty potentiometer, off — run — brake switch and fuse.



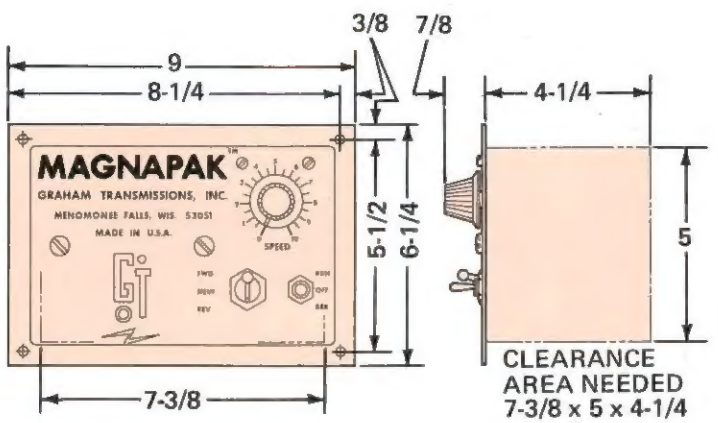
REMOTE MAGNAPAK SCR CONTROL WITH REVERSE
Models 550 and 555

Model No. 550. Enclosed. Including heavy duty industrial potentiometer, run-off-brake switch and forward-neutral-reverse switch.



MODEL 550

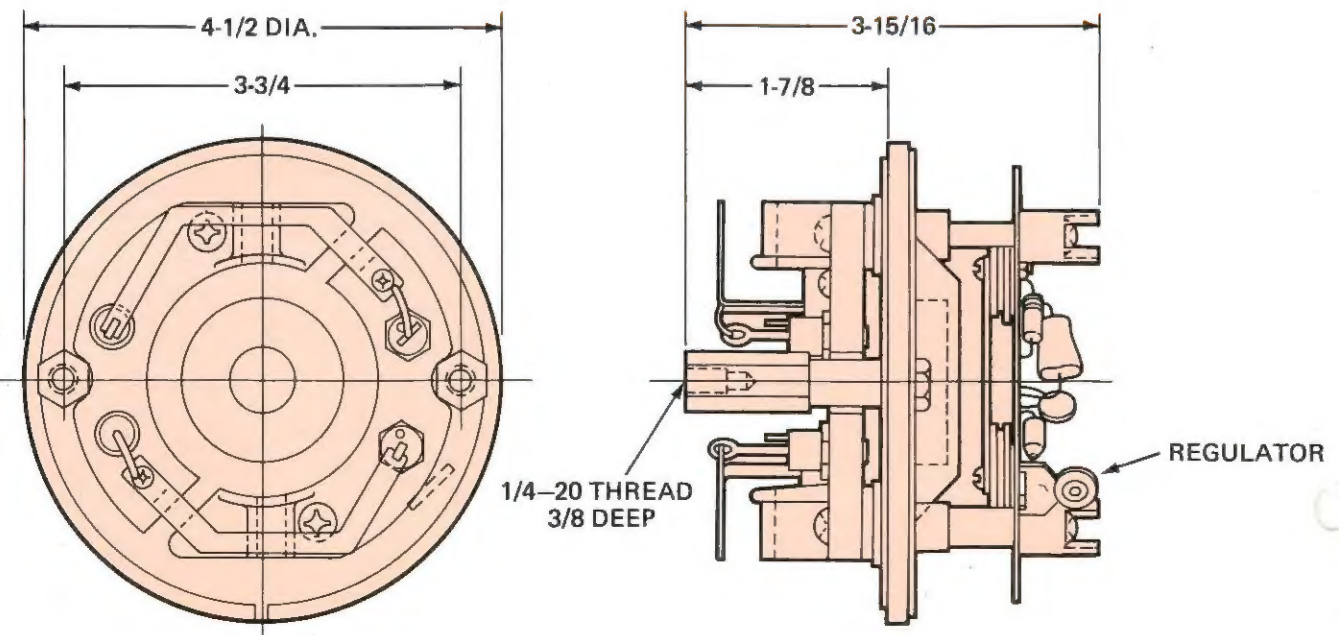
Model No. 555. Open. Panel mounted heavy duty industrial potentiometer, run-off-brake switch and forward-neutral-reverse switch.



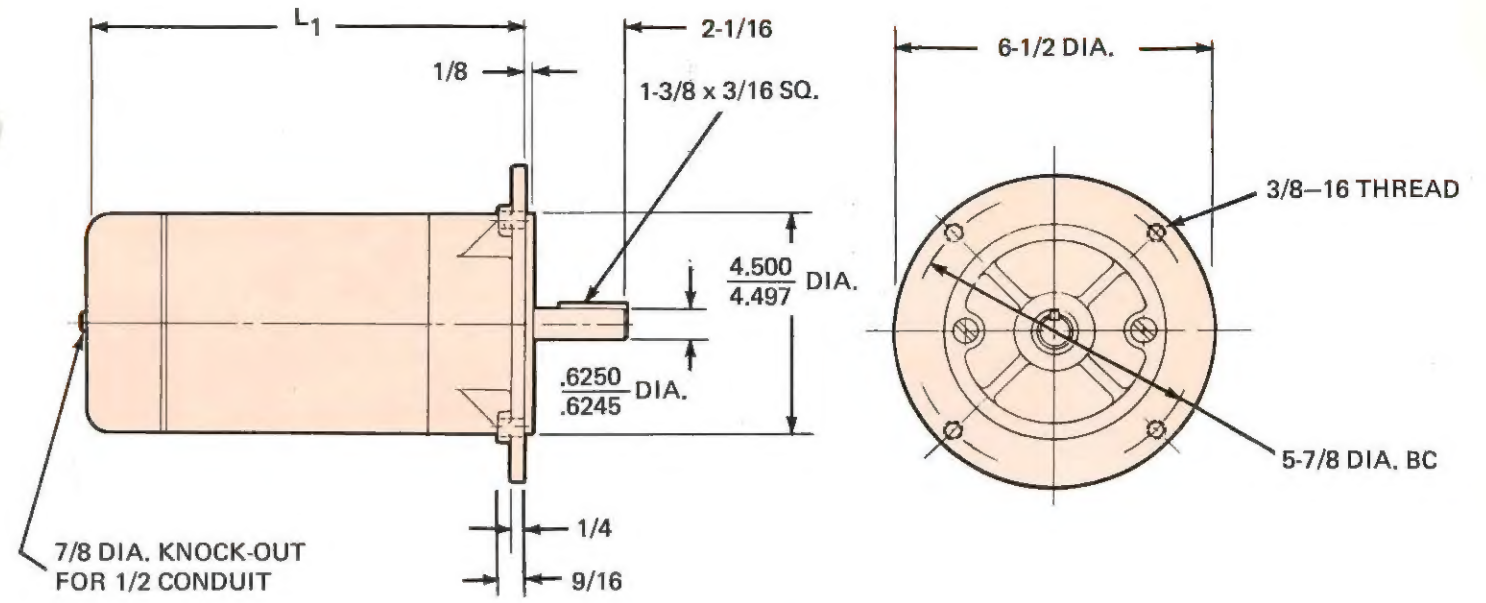
MODEL 555

REMOTE MAGNAPAK SCR CONTROL
FOR PANEL MOUNT — Model 560

Model No. 560. Chassis mount MAGNAPAK SCR.



MODEL 560

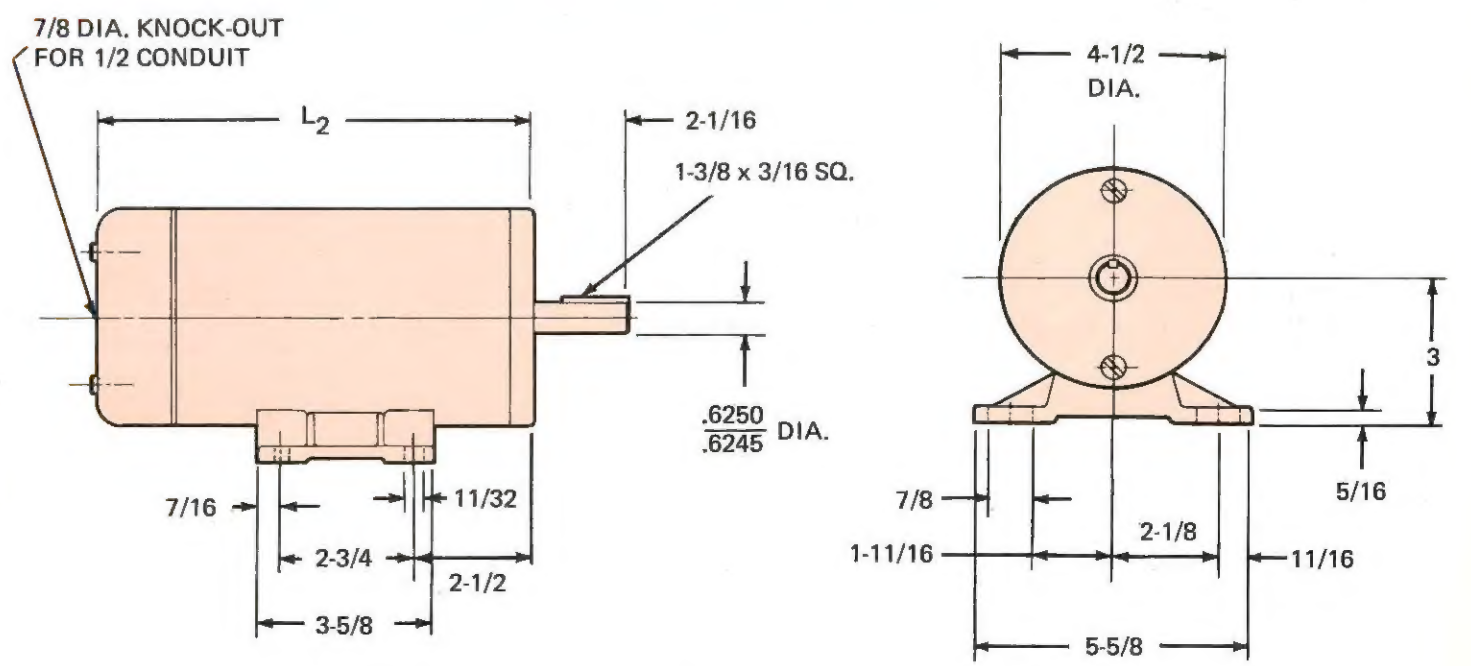


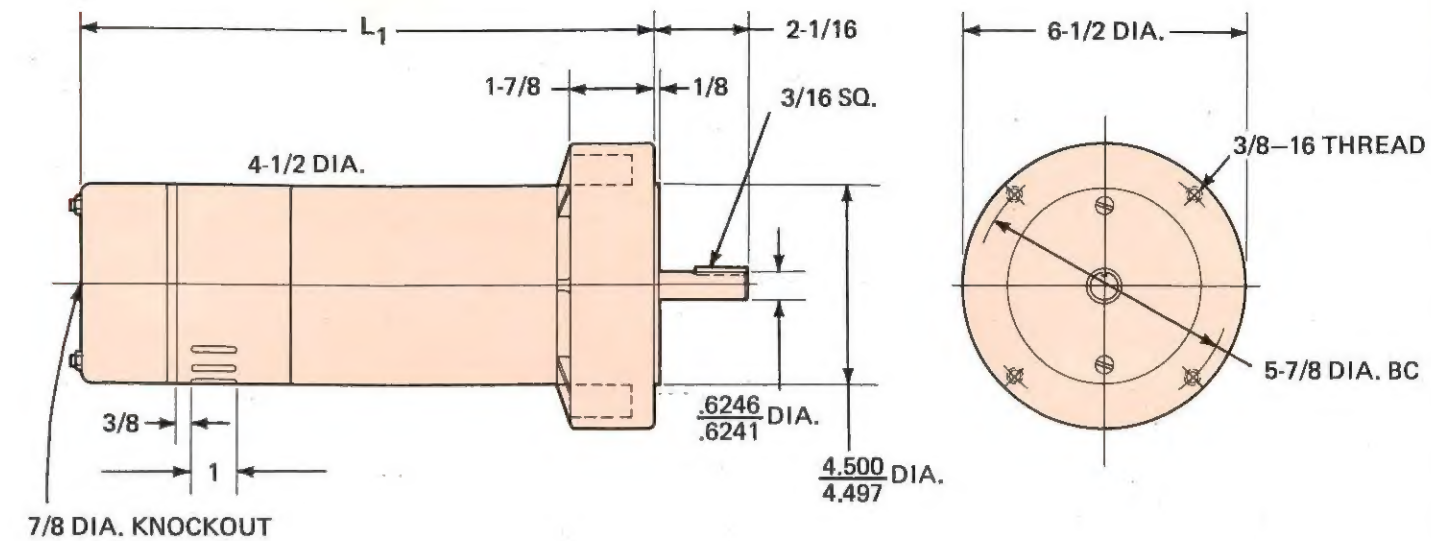
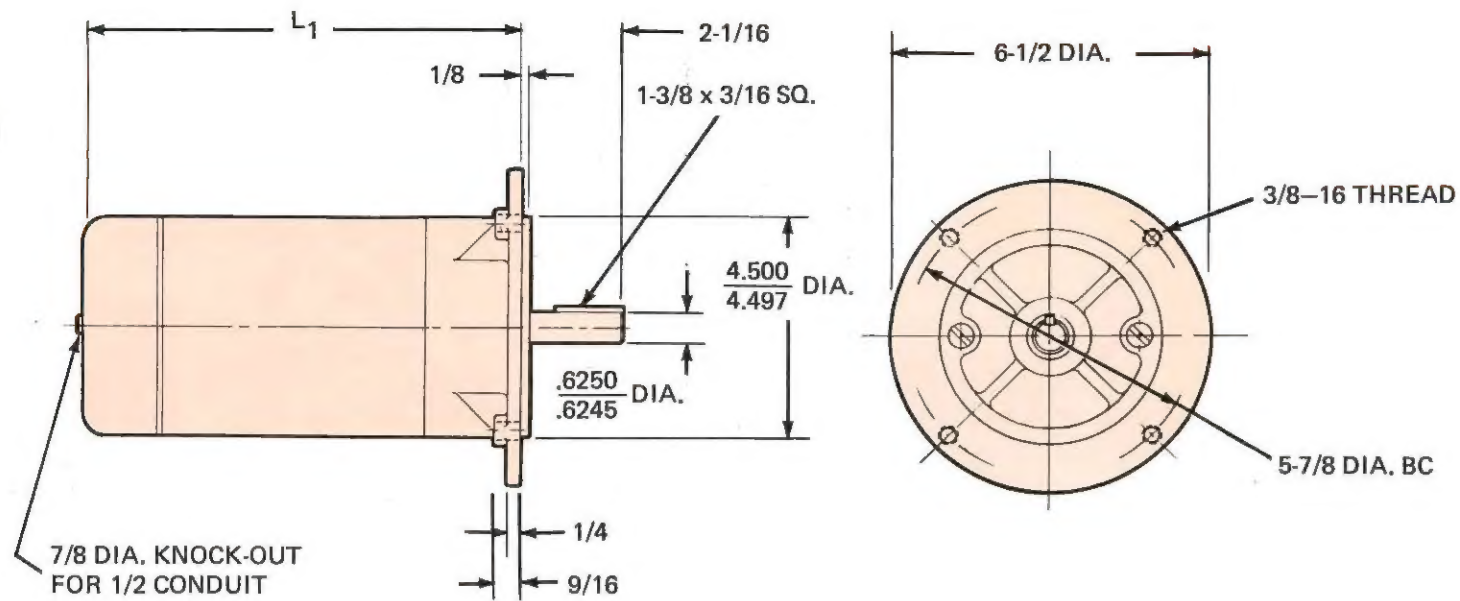
NEMA 56C FLANGE MOUNT

Capacity		Built-in Magnapak Control		Less Magnapak Control	
RATED H.P.	SPEED R.P.M.	L ₁	L ₂	L ₁	L ₂
1/8	1800	8-15/16	8-7/8	8-1/4	8-3/16
1/4	1800	9-15/16	9-7/8	9-1/4	9-3/16
1/3	1800	10-15/16	10-7/8	10-1/4	10-3/16
1/2	1800	11-15/16	11-7/8	11-1/4	11-3/16
3/4	1800	12-15/16	12-7/8	12-1/4	12-3/16
1	1800	-	-	12-1/4	12-3/16

TENV
MAGNAPAK

BASE MOUNT





Capacity		Built-in Magnapak Control		Less Magnapak Control	
RATED H.P.	SPEED R.P.M.	L ₁	L ₂	L ₁	L ₂
1/8	1800	8-15/16	8-7/8	8-1/4	8-3/16
1/4	1800	9-15/16	9-7/8	9-1/4	9-3/16
1/3	1800	10-15/16	10-7/8	10-1/4	10-3/16
1/2	1800	11-15/16	11-7/8	11-1/4	11-3/16
3/4	1800	12-15/16	12-7/8	12-1/4	12-3/16
1	1800	-	-	12-1/4	12-3/16

NEMA 56C FLANGE MOUNT

**TENV
MAGNAPAK**

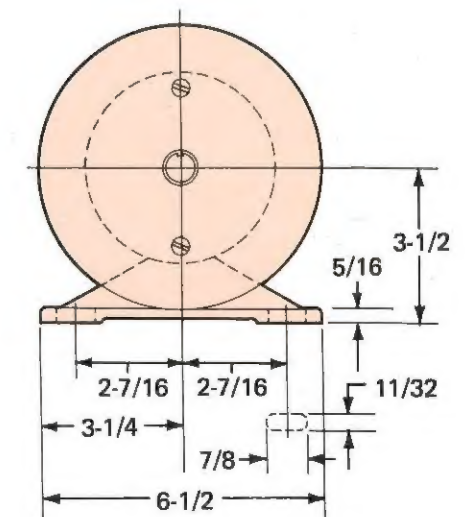
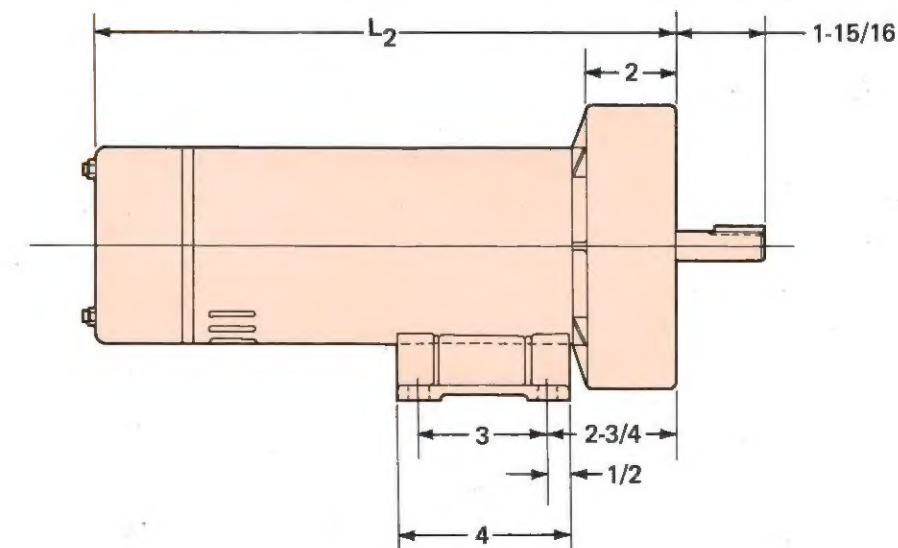
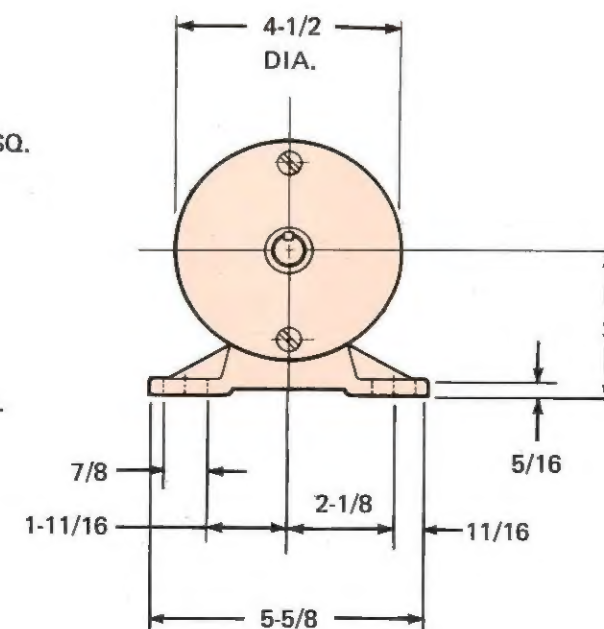
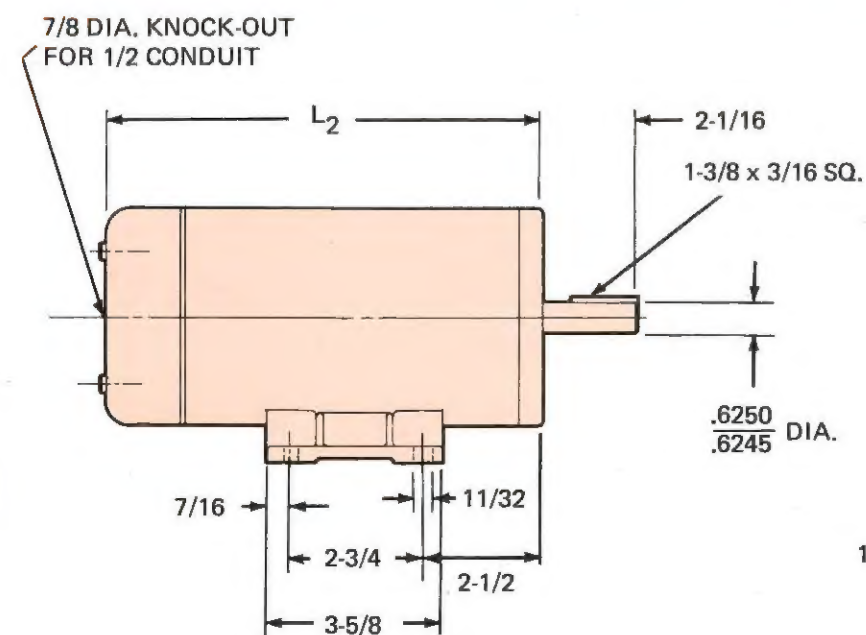
BASE MOUNT

Capacity		Built-in MAGNAPAK Control		Less MAGNAPAK Control	
RATED H.P.	SPEED R.P.M.	L ₁	L ₂	L ₁	L ₂
3/4	1800	13-7/32	13-11/32	12-17/32	12-21/32
1	1800	-	-	12-17/32	12-21/32

NEMA 56C FLANGE MOUNT

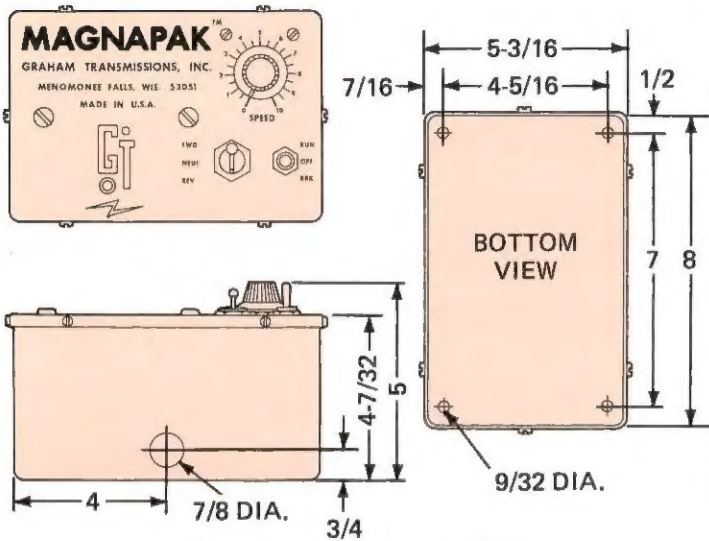
**OPEN DRIP-PROOF
MAGNAPAK**

BASE MOUNT



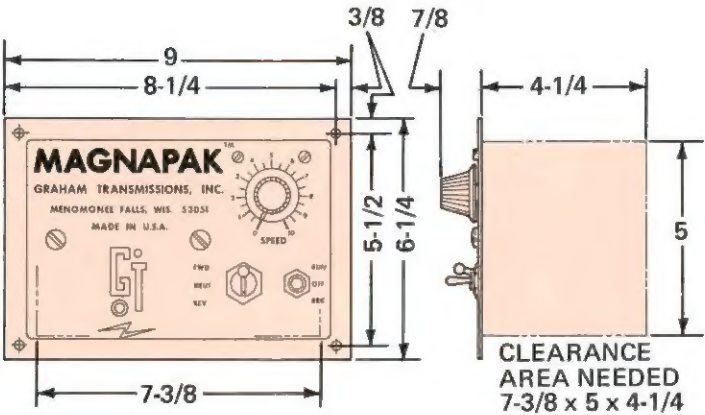
REMOTE MAGNAPAK SCR CONTROL WITH REVERSE
Models 550 and 555

Model No. 550. Enclosed. Including heavy duty industrial potentiometer, run-off-brake switch and forward-neutral-reverse switch.



MODEL 550

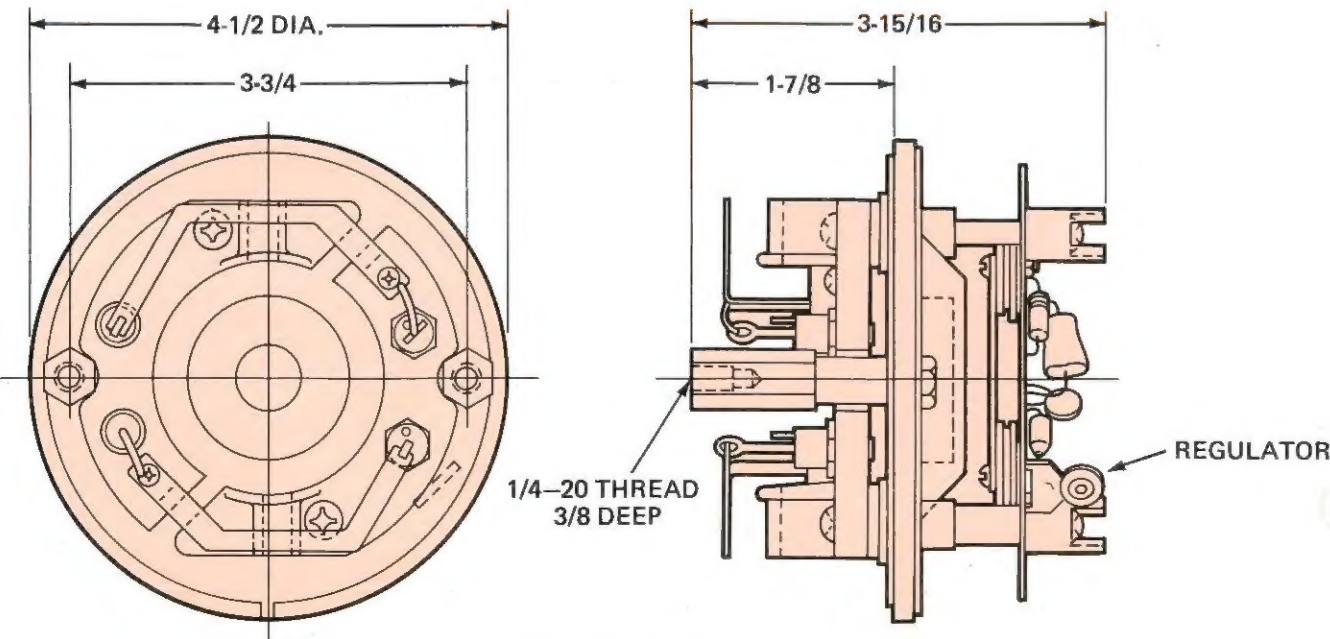
Model No. 555. Open. Panel mounted heavy duty industrial potentiometer, run-off-brake switch and forward-neutral-reverse switch.



MODEL 555

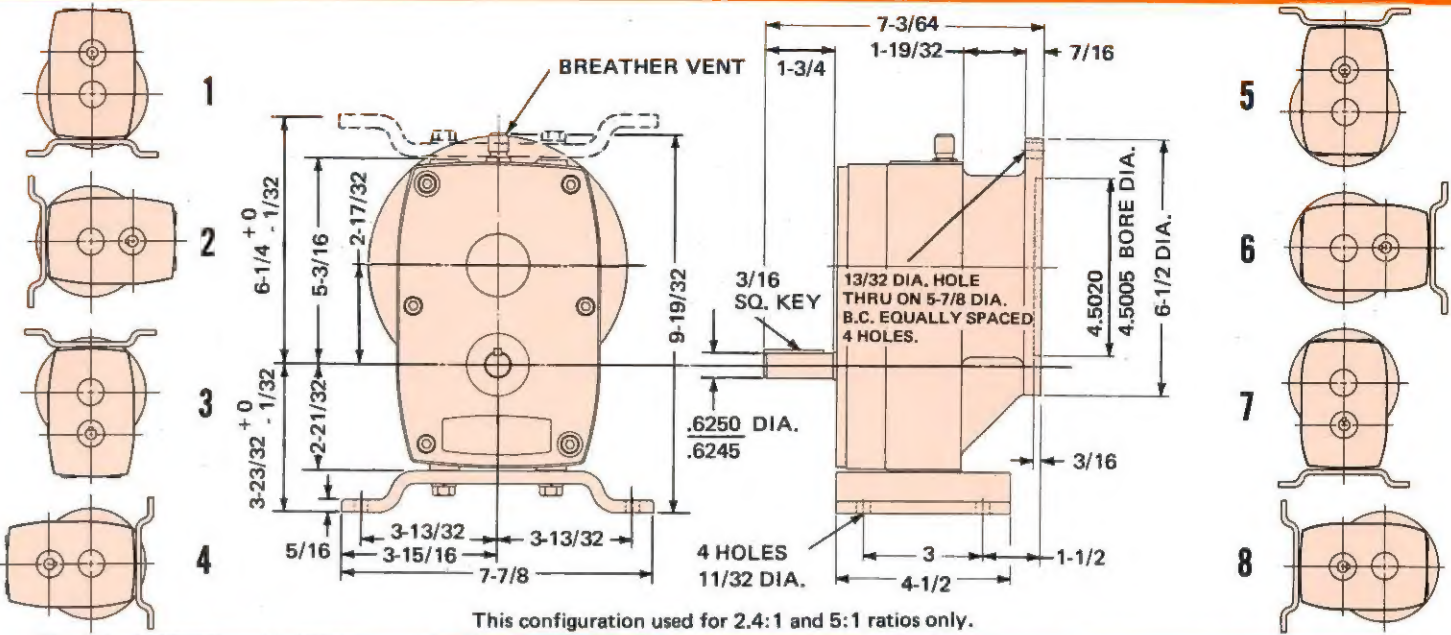
REMOTE MAGNAPAK SCR CONTROL
FOR PANEL MOUNT — Model 560

Model No. 560. Chassis mount MAGNAPAK SCR.



MODEL 560

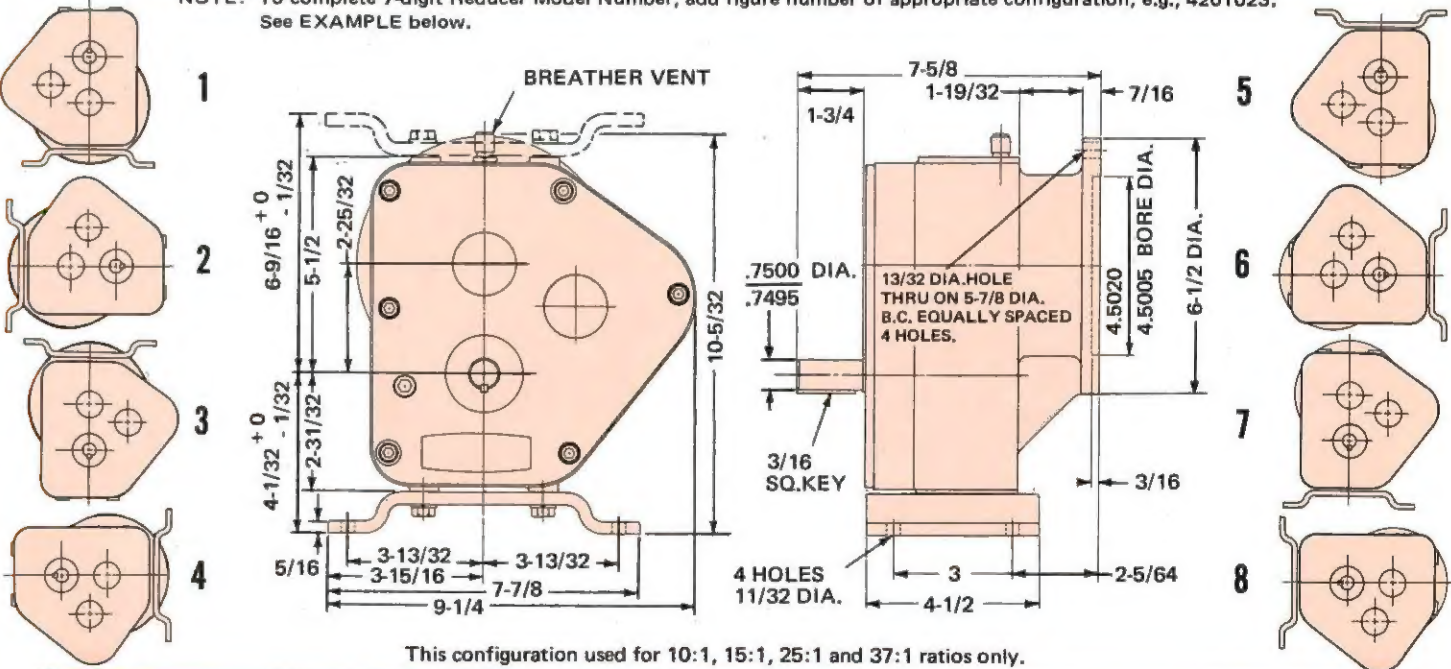
HELICAL SINGLE & DOUBLE REDUCERS



This configuration used for 2.4:1 and 5:1 ratios only.

SINGLE REDUCTION							
Ratio \ H.P.	1/8	1/4	1/3	1/2	3/4	1	Speed Range 1800 RPM Base Speed
2.4:1	420102 _	420102 _	420102 _	402102 _	420102 _	420102 _	750-0
5:1	420105 _	420105 _	420105 _	420105 _	420105 _	420105 _	360-0

NOTE: To complete 7-digit Reducer Model Number, add figure number of appropriate configuration; e.g., 4201023. See EXAMPLE below.



This configuration used for 10:1, 15:1, 25:1 and 37:1 ratios only.

DOUBLE REDUCTION							
Ratio \ H.P.	1/8	1/4	1/3	1/2	3/4	1	Speed Range 1800 RPM Base Speed
10:1	420310 _	420310 _	420310 _	420310 _	420310 _	420310 _	180-0
15:1	420315 _	420315 _	420315 _	420315 _	420315 _	420315 _	120-0
25:1	420325 _	420325 _	420325 _	420325 _	420425 _	420425 _	72-0
37:1	420337 _	420337 _	420337 _	420337 _	—	—	48-0

NOTE: To complete 7-digit Reducer Model Number, add figure number of appropriate configuration; e.g., 4203104. See EXAMPLE below.

EXAMPLE

The complete model number of helical reducer for 1/2 H.P. - 25:1 reduction is shown at right.

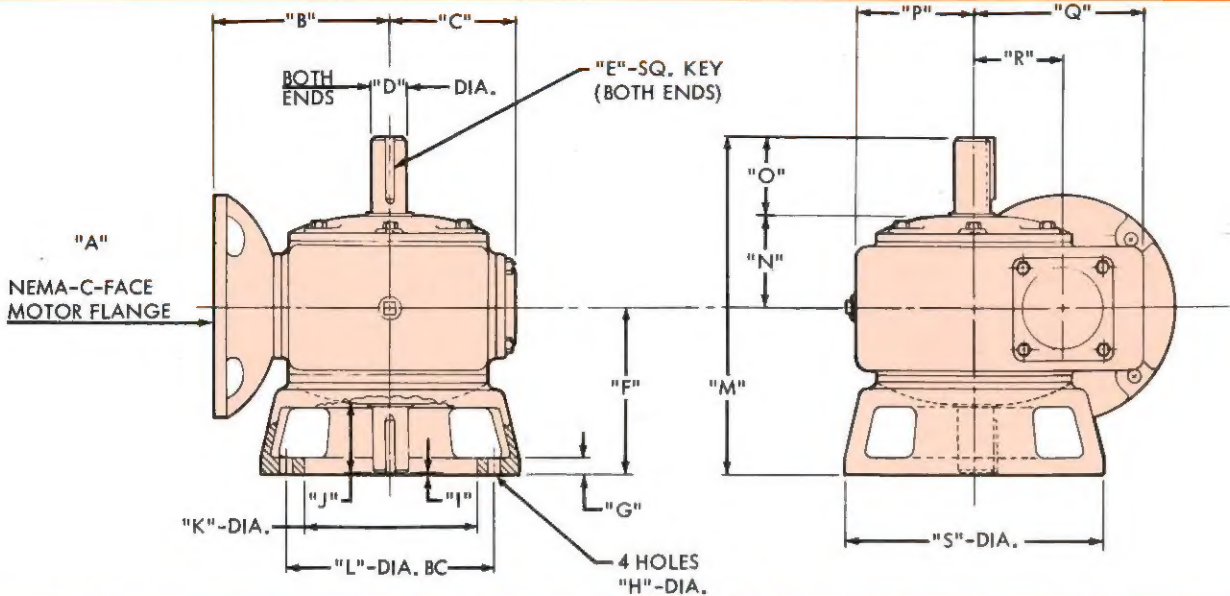
56 "C" Flange
Helical

42 03 25 4

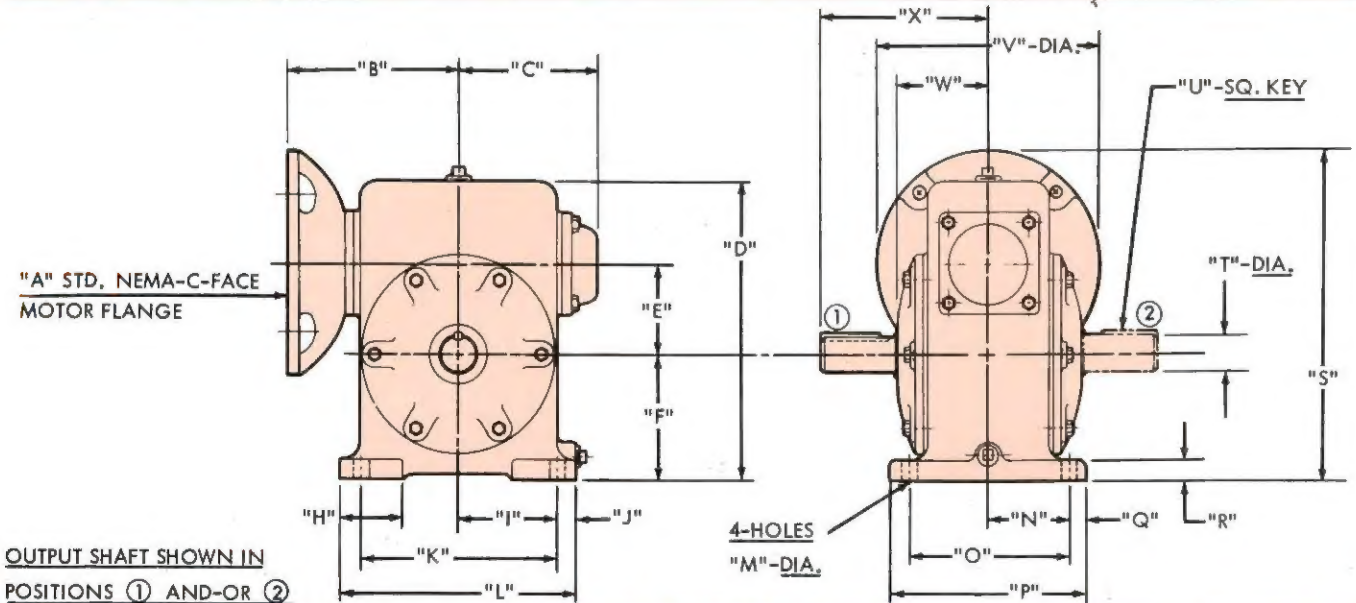
Series — Ratio

Mounting Configuration
(7th Digit)

WORM REDUCERS



VERTICAL BASE MOUNT																			
Series	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
3200	56	5-27/32	4-7/16	1.2490 1.2495	1/4	5	9/16	17/32	1/16	2-7/32	6	7	10-7/16	2-31/32	2-15/32	4-1/8	6	3.250	9-3/8
2600	56	5-1/16	3-11/16	1.1240 1.1245	1/4	4-5/8	1/2	13/32	1/16	2-1/8	5-1/2	6-1/4	9-23/32	2-3/4	2-11/32	3-1/2	5	2.625	7-11/16
2400	56	4-15/16	3-9/16	.9990 .9995	1/4	4-3/8	15/32	13/32	1/16	1-3/4	4-5/8	5-5/8	8-11/16	2-5/16	2	3-3/8	4-1/2	2.375	7-7/16
2100	56	4-7/16	1-29/32	.8740 .8745	3/16	4	7/16	13/32	1/16	1-15/16	4	5	8-3/8	2-9/32	2-3/32	3	3-15/16	2.063	6-3/4
1800	56	4	2-1/2	.7490 .7495	3/16	3-1/4	5/16	9/32	1/16	1-9/16	3-5/8	4-1/8	6-3/4	1-3/4	1-3/4	2-1/8	3-3/8	1.750	5-5/8



FOOT MOUNTED																							
Series	A	B	C	D	E	F	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
3200	56	5-27/32	4-7/16	10-3/8	3.250	4-3/4	2-1/2	3-3/4	11/16	7-1/2	8-7/8	17/32	2-1/2	5	6-1/4	5/8	7/8	10-7/8	1.2490 1.2495	1/4	6-1/2	2-31/32	5-7/16
2600	56	5-1/16	3-3/4	8-5/8	2.625	3-5/8	1-7/8	2-15/16	9/16	5-7/8	7	15/32	2-3/8	4-3/4	5-3/4	1/2	5/8	9-1/2	1.1240 1.1245	1/4	6-1/2	2-3/4	5
2400	56	4-15/16	3-9/16	8	2.375	3-1/2	1-11/16	2-3/4	1/2	5-1/2	6-1/2	13/32	2-1/16	4-1/8	5-1/8	1/2	9/16	9-1/8	.9990 .9995	1/4	6-1/2	2-5/16	4-1/16
2100	56	4-7/16	2-15/16	7-1/16	2.063	3-1/8	1-1/4	2-3/8	1/2	4-3/4	5-3/4	13/32	2-1/16	4-1/8	5-1/8	1/2	1/2	8-7/16	.8740 .8745	3/16	6-1/2	2-9/32	4-1/4
1800	56	4	2-1/2	5-5/8	1.750	2-1/4	1-1/8	2	1/2	4	5	13/32	1-3/4	3-1/2	4-1/2	1/2	3/8	7-1/4	.7490 .7495	3/16	6-1/2	1-3/4	3-1/2

HOW TO ORDER

MAGNAPAK with Built-in MAGNAPAK SCR Control.

Without remote point, simply select model number from the first group of model numbers in the table of specifications on page 2.

Remote Points for Above.

Select a 520, 530 or 540 as described on page 3.

PM Motors for use with Remote MAGNAPAK Controls.

Select model number from the second group in the table of specifications on page 2.

Reversing MAGNAPAK Control.

Select PM MAGNAPAK motor from second group described above. Select a 550 or 555 remote point with reverse as described on page 4.

Chassis Mount MAGNAPAK SCR.

Use a 560 remote MAGNAPAK described on page 4. Specify horsepower.

If maximum speed of the MAGNAPAK is substantially less than the base speed listed on page 2, a reducer should be added. Select a reducer that will reduce base speed to match that of the equipment to be driven.

Helical Gear Reducer.

Select helical single or double reducer from page 7.

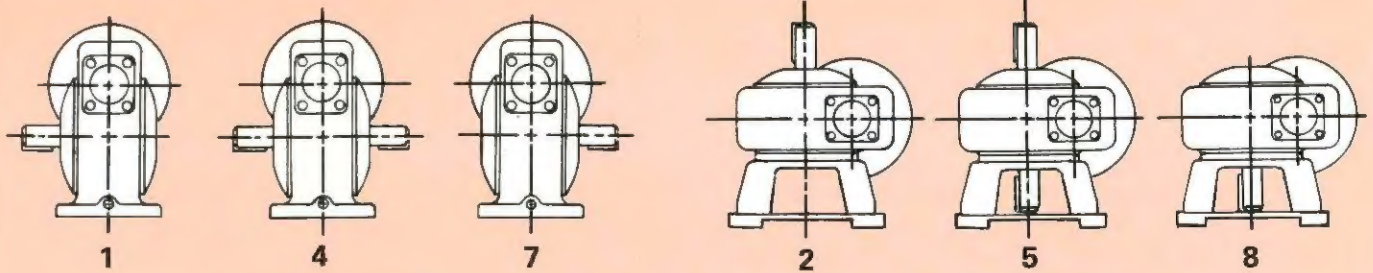
Worm Reducer.

Select worm reducer from information below.

WORM REDUCER MODEL NUMBER

The worm reducer model number consists of seven digits. To specify a worm reducer to mate with the 56 "C" flange motors, select the first six digits from the chart at right. For the seventh digit, which specifies the mounting configuration and output shaft construction, add the figure number of the appropriate configuration from those shown below. See EXAMPLE for full explanation of model number makeup.

Ratio	H.P.	1/4	1/3	1/2	3/4	Speed Range 1800 RPM Base Speed
5:1		321805	321805	321805	321805	360-0
15:1		321815	321815	321815	322115	120-0
25:1		321825	321825	322125	322425	72-0
40:1		321840	322140	322440	322640	45-0
60:1		322160	322460	322660	323260	30-0

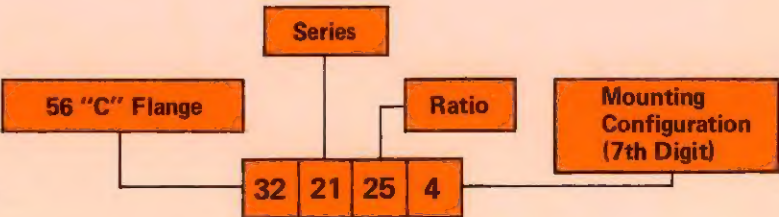


FOOT-MOUNTED

BASE-MOUNTED

EXAMPLE

The complete model number of a worm reducer for 1/2 H.P.-25:1 reduction, foot-mounted with double shaft extension, is shown at right.





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MAGNAPAK^{T.M.}



Reversing Magnapak^{T.M.} has integral operators station

Economy, simplicity, and compactness are standard features of the reversing Magnapak variable speed motor.

Integral operators station includes a precision potentiometer, on/off brake switch, forward and reverse switch, and A.C. line fuse. A power cord is available with unit upon request.

Specify model 0726039 to be used on all models shown on page five of bulletin MAG-200. Add two inches to L1 or L2 dimension for overall length.



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MAGNAPAK^{T.M.}



Magnapak^{T.M.} variable speed motor now with *built-in* operator station

The Magnapak Permanent Magnet D.C. Motor with ***built-in*** SCR control now has ***built-in*** operators station. Installation is simplified, requiring only an A.C. power connection.

Integral Operators Station includes; precision potentiometer, on/off brake switch, A.C. line fuse, and A.C. power connector. A power cord is available upon request.

Specify model 0726033 to be used on all models shown on page five and six of bulletin MAG-200. Add two inches to L1 and L2 dimensions for overall length.

NOTE: Handle shown above is an option available for portable applications.



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